GOVERNMENT OF INDIA
MINISTRY OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA
UNSTARRED QUESTION NO. 3850
ANSWERED ON 08.12.2016

ASSESSMENT OF GROUND WATER RESOURCES

3850. SHRI SUBHASH PATEL
SHRI DEVAJIBHAI G. FATEPARA

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION be pleased to state:

(a) whether the Central Ground Water Board (CGWB) has made any assessment of the ground water resources in the country including Madhya Pradesh and Gujarat, if so, the details thereof, State-wise;

(b) whether the Government has formulated any special programme for the said States after the assessment, if so, the details thereof; and

(c) the steps taken/to be taken by the Government to fulfil the future ground water need in these States?

ANSWER

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION
(DR. SANJEEV KUMAR BALYAN)

(a) Central Ground Water Board (CGWB) carries out periodic assessment of replenishable ground water resources in the Country jointly with State Governments including Madhya Pradesh and Gujarat. State-wise details are given at **Annexure.**

(b) & (c) The mechanisms put in place and the measures taken by the Ministry of Water Resources, RD & GR to control depletion of ground water level and outcomes thereof are given below :

- The National Water Policy (2012) formulated by Ministry of Water Resources, RD & GR, inter-alia, advocates conservation, promotion and protection of water and highlights the need for augmenting the availability of water through rain water harvesting, direct use of rainfall and other management measures. The National Water Policy (2012) has been forwarded to all State Governments/ UTs and concerned Ministries/ Departments of Central Government for adoption.
- CGWB has also prepared a conceptual document entitled “Master Plan for Artificial Recharge to Ground Water in India” during 2013, involving ground water scientists/experts. The Master Plan envisages construction of 1.11 crore rain water harvesting and artificial recharge structures in the

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Country at an estimated cost of Rs.79,178 crores to harness 85 BCM (Billion Cubic Metre) of water. The augmented ground water resources will enhance the availability of water for drinking, domestic, industrial and irrigation purpose. The Master Plan has been circulated to all State Governments for implementation.

- This Ministry works in close coordination with Ministry of Rural Development for groundwater recharge. The details of completed public works related to Natural Resources Management by the MoRD for the States of Gujarat and Madhya Pradesh are as under:

Sl. No.	State	FY 2014-15		FY 2015-16		2016-17 as on 25/11/2016	
		Total Works	Expenditure (Rs. In crore)	Total Works	Expenditure (Rs. In crore)	Total Works	Expenditure (Rs. In crore)
1	Gujarat	7024	115.85	13752	219.96	17502	277.98
2	Madhya Pradesh	138916	719.75	63518	630.30	79270	772.20

- The Ministry of Drinking Water & Sanitation has suggested all States to adopt water conservation measures like roof top rainwater harvesting, erecting sustainability structures for water conservation etc. For creating such sustainability structures, 10 % of National Rural Drinking Water Programme (NRDWP) funds are provided to the States.

- Department of Land Resources is currently implementing 8214 watershed development projects in 28 States covering an area of about 39.07 million ha. under the Watershed Development Component (WDC) of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) principally for development of rainfed portions of net cultivated area and culturable wastelands. The major activities taken up under the WDC-PMKSY, inter-alia, include ridge area treatment, drainage line afforestation, soil and moisture conservation, rain water harvesting, horticulture, and pasture development etc. 610 projects were sanctioned in Gujarat and 517 in Madhya Pradesh.

- Central Ground Water Authority (CGWA) has been constituted under “The Environment (Protection) Act, 1986” for the purpose of regulation and control of ground water development and management in the Country. So far, CGWA has notified 162 areas in the Country for the purpose of regulation of ground water, including four and seven in Gujarat and Madhya Pradesh respectively. Under the CGWA guidelines, in notified areas, no permission is accorded to extract ground water through any energized means for any purpose other than drinking water. However, for non-notified areas, ground water withdrawal by industries is regulated by means of guidelines/criteria as specified as CGWA.

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- CGWA has issued advisories to States and UTs to take measures to promote/adopt artificial recharge to ground water / rain water harvesting. 30 States/UTs, including Gujarat and Madhya Pradesh, have made rain water harvesting mandatory by enacting laws or by formulating rules & regulations or by including provisions in Building bye-laws or through suitable Government Orders.

- This Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for its regulation and development which includes provision of rain water harvesting. Gujarat and Madhya Pradesh have initiated process to enact the Model Bill.

- CGWB has taken up Aquifer Mapping and Management programme during XII Plan, under the scheme of Ground Water Management and Regulation. The Aquifer Mapping is aimed to delineate aquifer disposition and their characterization for preparation of aquifer/area specific ground water management plans, with community participation. As on 30.6.2016, an area of 31,522 sq.km and 9,268 sq km has been covered in Gujarat and Madhya Pradesh respectively.

- CGWB had taken up Demonstrative Rain Water Harvesting and Artificial Recharge projects in 22 States of the Country, under Central Sector Scheme "Ground Water Management & Regulation". Under the scheme, 1661 demonstrative recharge structures were approved for construction in various States/UTs including 116 and 51 in Gujarat and Madhya Pradesh respectively. Out of these 116 and 51 structures, 100 and 43 structures were completed in Gujarat and Madhya Pradesh.

- MoWR, RD & GR has also launched ‘Jal Kranti Abhiyan’ (2015-16 to 2017-18) in order to consolidate water conservation and management in the Country through a holistic and integrated approach involving all stakeholders, making it a mass movement.

- CGWB has been organizing mass awareness programmes in the Country to promote rain water harvesting and artificial recharge to ground water; more than 17 lakh children participated in a nation-wide painting competition in the last year to promote conservation of water.

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ANNEXURE

Annexure referred in reply to Lok Sabha Unstarred Q.NO. 3850 for reply on 08.12.2016 regarding "Assessment of Ground Water Resources"

STATE-WISE GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT INDIA
(As on 2011)

(in Billion Cubic Metre(bcm))

Sl. No.	States / Union Territories	Annual Replenishable Ground Water Resource	Natural Discharge during non-monsoon season	Net Annual Ground Water Availability	Annual Ground Water Draft			Stage of Ground Water Development (%)
					Irrigation	Domestic and Industrial uses	Total	
	States							
1	Andhra Pradesh	20.7892	1.9064	18.8828	6.2694	0.7381	7.0075	37
2	Telangana	15.098	1.4138	13.6844	6.9103	0.5919	7.502	55
3	Arunachal Pradesh	4.5100	0.4500	4.0600	0.0020	0.0010	0.0030	0.08
4	Assam	28.5200	2.7300	25.7900	2.8600	0.6400	3.4900	14
5	Bihar	29.3350	2.4705	26.8645	10.2550	1.6960	11.9509	44
6	Chhattisgarh	12.4200	0.7900	11.6300	3.4300	0.6200	4.0500	35
7	Delhi	0.3105	0.0234	0.2871	0.1402	0.2519	0.3922	137
8	Goa	0.2424	0.0970	0.1454	0.0101	0.0311	0.0411	28
9	Gujarat	18.5686	0.9832	17.5854	10.7477	1.1074	11.8551	67
10	Haryana	10.7800	0.9900	9.7900	12.3500	0.7100	13.0500	133
11	Himachal Pradesh	0.5590	0.0280	0.5311	0.2506	0.1272	0.3778	71
12	Jammu & Kashmir	4.2512	0.4251	3.8261	0.1988	0.6077	0.8065	21
13	Jharkhand	6.3100	0.5500	5.7600	1.3100	0.5500	1.8600	32
14	Karnataka	17.0266	2.2154	14.8112	8.5916	0.8198	9.4114	64
15	Kerala	6.6864	0.6134	6.0730	1.3046	1.5310	2.8355	47
16	Madhya Pradesh	35.0406	1.7520	33.2886	17.4809	1.3527	18.8335	57
17	Maharashtra	33.9474	1.7955	32.1519	16.1460	1.0293	17.1754	53
18	Manipur	0.4401	0.0440	0.3961	0.0033	0.0007	0.0040	1.02
19	Meghalaya	1.7805	0.1780	1.6024	0.0015	0.0002	0.0017	0.08
20	Mizoram	0.0304	0.0030	0.0273	0.0000	0.0010	0.0010	3.52
21	Nagaland	0.6159	0.0616	0.5543	0.0000	0.0340	0.0340	6.13
22	Odisha	17.7768	1.0859	16.6909	3.8126	0.9162	4.7288	28
23	Punjab	22.5300	2.2100	20.3200	34.1700	0.7100	34.8800	172
24	Rajasthan	11.9414	1.1125	10.8290	13.1332	1.7098	14.8430	137
25	Sikkim*	-	-	0.0442	0.0027	0.0086	0.0113	26
26	Tamil Nadu	21.5326	2.1533	19.3793	13.1688	1.7638	14.9326	77
27	Tripura	2.5866	0.2286	2.3580	0.0932	0.0694	0.1626	7
28	Uttar Pradesh	77.1900	5.5300	71.6600	48.7400	4.0400	52.7800	74
29	Uttarakhand	2.0403	0.0449	1.9954	1.1033	0.0298	1.1331	57
30	West Bengal	29.2511	2.6688	26.5823	9.7195	0.9731	10.6926	40
	Total (States)	**432.11**	**34.55**	**397.60**	**222.21**	**22.66**	**244.85**	**62**
	Union Territories							
1	Andaman & Nicobar	0.3080	0.0216	0.2865	0.0006	0.0121	0.0127	4.44
2	Chandigarh	0.0216	0.0022	0.0194	0.0000	0.0000	0.0000	0
3	Dadra & Nagar Haveli	0.0622	0.0031	0.0591	0.0072	0.0056	0.0129	22
4	Daman & Diu	0.0181	0.0012	0.0169	0.0145	0.0019	0.0164	97
5	Lakshadweep	0.0105	0.0070	0.0035	0.0000	0.0023	0.0023	67
6	Puducherry	0.1893	0.0190	0.1703	0.1237	0.0293	0.1530	90
	Total (UTs)	**0.6100**	**0.0500**	**0.5600**	**0.1500**	**0.0500**	**0.2000**	**36**
	Grand Total	**432.7200**	**34.6000**	**398.1600**	**222.3600**	**22.7100**	**245.0500**	**62**

* Note: Net ground water availability in Sikkim has been estimated based on spring discharge and is not reflected in the corresponding total annual replenishable resource. This results in a difference of 0.044 bcm in the State Total and Grand Total.